

## **Treatment of ADHD in adults: State of the Science and Guidelines for Clinicians**

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Traditionally accepted as a childhood disorder, numerous prospective, longitudinal studies demonstrate the persistence of symptoms to an impairing degree in up to 65% of children into adulthood leading to prevalence rate in the general adult U.S. population of 4.4%<sup>1-3</sup>. Unfortunately clinicians not trained to identify the disorder often overlook a highly prevalent adult psychiatric condition and ascribe symptoms to other disorders or personality types. The negative life consequences directly related to ADHD extend into high rates of unemployment, divorce, driving accidents, substance/alcohol abuse, financial debt, and lower than expected academic achievement.<sup>4</sup> Highly genetic, first-degree family members of the patient often have ADHD as well. Growing neuro-imaging shows differences in dopamine receptor density in the basal ganglion, volumetric differences, frontal cortex maturational delay, and differences in neural pathway activation for specific tasks.<sup>5</sup>

The treatment options for adults are both pharmacologic and psychotherapeutic. In addition to the patient interview, it is very helpful to have the patient self-rate the ADHD symptoms on the 18 symptom Adult Self Report ADHD Symptom Checklist.<sup>6</sup> This is a time efficient method to quantify specific symptoms at baseline that can be tracked during the course of treatment with subsequent patient ratings.<sup>7</sup> A 50% reduction in a symptom score is a clinically meaningful achievement that produces a clinical impression of “moderate” improvement. In addition to symptom reduction, the change in daily functioning ought to be documented in the treatment response assessment.<sup>8</sup>

The compounds effective in treating adults with ADHD are the same compounds used to treat children and adolescents. However, the medications FDA approved for adult ADHD are once-daily, long-acting medications. No short-acting stimulants are approved by the FDA for adult ADHD. Technology has generated several vehicles of delivery for these compounds in order to extend the duration of action up to 14 hours in adult.

The treatment of adult ADHD without concurrent comorbidity is relatively straightforward, starting with a long-acting stimulant and titrating dose to optimal response. If the patient fails to respond or can't tolerate the medication, the clinician changes the stimulant compound while remaining with a long-acting preparation. Failing to respond to either stimulant compound might be reason to try the non-stimulant, atomoxetine. Concomitantly, organizational/behavioral/social therapies ought to be tailored and provided to the patient. Randomized, controlled trials have demonstrated the utility of adding these therapies to medication treatments. Milder cases of ADHD may be adequately served with such therapies alone.<sup>8</sup>

Complexity arises in the diagnostic phase when ADHD co-exists with other concurrent psychiatric comorbidities. First, being able to parse out symptoms into appropriate diagnostic categories can be challenging. Emotional dysregulation of ADHD may appear to be a mood disorder. The tardy, inconsistent, forgetful ADHD adult may be thought to have a passive-aggressive personality disorder. Clinician acumen is critical to enumerating the co-existing disorders in order to formulate a diagnostic prioritization, which allows for the development of a pharmacologic algorithm.<sup>9</sup>

Although the emerging research on the treatment of adult ADHD and comorbidities is still sparse, the current recommendations on disorder sequencing for treatment is: initiated treatment for alcohol and substance abuse first, followed by stabilizing mood disorders, then treating severe anxiety disorders, followed by ADHD treatment. The goal is to treat one disorder effectively without making the other conditions worse.<sup>10</sup>

Because of the abuse/misuse potential or performance-enhancing nature of stimulant medications, clinicians are concerned about prescribing these medicines to patients judged to be high-risk. Red flags in the presentation are history of substance/alcohol abuse, arrest for drug sales, poor academic performance, unwillingness to include collateral informants, request for a specific agent (short-acting), or conduct disorder/antisocial personality.<sup>11</sup> Eliciting these factors in the evaluation will direct the clinician to offer ADHD treatment that diminishes the likelihood of an undesirable outcome.

In the face of multiple concurrent psychiatric comorbidities, polypharmacy is more frequent. In addition to formulating the medication trial sequence, the clinician needs to be mindful of medical risk factors (ie hypertension or sudden death in young family member) and drug-drug interactions. Thoughtful pharmacologic sophistication challenges clinicians not accustomed to such complexity. Successful treatment should reduce ADHD symptoms, diminish daily impairments and enhance overall quality of life.<sup>12</sup> A satisfying outcome is gratifying for the clinician and rewarding for the patient and family.

Patients with ADHD are eligible for academic accommodations (Individual Educational Plan)<sup>13</sup> or occupational accommodations (Americans with Disabilities Act).<sup>14</sup> Please review the potential benefits with the patient and facilitate those accommodations that may be helpful in optimizing performance.

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